



Basis of Reporting 2024

This document accompanies the Solenis 2024 Sustainability Report and includes details on definitions, reporting scope and methodology of the metrics reported.

The Sustainability Report covers the Solenis activities that are under its Operational Control.

Environmental Data

Metric	Method	Methodology
General		
Solenis owned manufacturing facilities	Operational Control	The total number of manufacturing sites that are owned and operated by Solenis. This excludes manufacturing facilities that are operated on customer sites.
Solenis owned manufacturing facilities on customer sites	Operational Control	The total number of manufacturing facilities that are owned and operated by Solenis on customer sites. This excludes facilities where the equipment is owned by Solenis but operated by the customer.
Total production volume	Direct measurement	Each site reports its monthly production volume into a central database.
Purchased raw materials	Spend report	The total volume of raw materials purchased and obtained from the SAP system. This excludes materials shipped intercompany (e.g., raw materials, intermediates), packaging materials and raw materials used at contract manufacturers (tollers).
Emissions		
Scope 1 - Direct emissions		
These emissions include CO ₂ , CH ₄ and N ₂ O emissions from fuel plus HFC emissions from refrigerant use. Solenis does not use or produce PFCs, NF ₃ and SF ₆ compounds. Emissions from biogas fuel is reported as biogenic emissions		
Fuel used in manufacturing	Fuel use	Activity data is collected from the manufacturing sites on the quantity and types of fuel used. The activity data is combined with emission factors from the DEFRA databased 2024
Fuel used in non-manufacturing properties	Average Data	Floor area and building type data for non -manufacturing properties under our operational control is reviewed and combined with intensity data from the Energy Information Administration (EIA)- Commercial Buildings Energy Consumption Survey (CBECS) . The activity data is

Metric	Method	Methodology
		combined with emission factors the DEFRA databased 2024 for diesel, gasoline and LPG
Fuel used in vehicles	Fuel use, vehicle numbers	<p>The emissions from vehicle use are based on the data available from the leasing companies. Due to the integration of legacy Solenis and Diversey systems the data quality varies depending on region.</p> <p><u>North America</u> Data on fuel type, fuel consumption and distance travelled from the leasing company is combined with emissions factors from the US EPA Emission factors Hub 2024 to calculate CO_{2e} emissions. The Diversey data was not included until quarter 3 and therefore the data for the first two quarters is scaled up based on the actual vehicle numbers to estimate the missing data.</p> <p><u>Europe</u> Data on fuel type and fuel consumption from the leasing companies is combined with the DEFRA UK Government GHG Conversion Factors for Company Reporting 2024 to calculate CO_{2e} emissions. To calculate the CH₄ and N₂O components the distance travelled for each vehicle is estimated based on the average fuel consumption of each vehicle type.</p> <p><u>Asia Pacific</u> Good quality data is only available for the first quarter of the 2025 financial year. Data on fuel type, fuel consumption and distance travelled is combined with emission factors from the US EPA Emission factors Hub 2024 calculate CO_{2e} emissions. Distance is estimated from fuel use and fuel consumption for each vehicle type where actual data is not available. The full year emissions for 2024 are then calculated by scaling the Q1 2025 data by the known number of vehicles in 2024.</p> <p><u>Middle East and Africa</u> Only vehicle numbers are known for this region. As most of the vehicles are in Turkey the emissions are estimated by scaling the emissions from Europe by the known vehicle numbers.</p> <p><u>Latin America</u> Only vehicle numbers and fuel type are known for this region. The emissions are estimated by assuming each vehicle travels the average distance travelled in the North American fleet. This is then used to estimate fuel</p>

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		consumption which is combined with the emission factors from US EPA Emission factors Hub 2024 to estimate CO ₂ e emissions. To account for missing data the total number of vehicles reported by the leasing companies for each region is compared with the known number of vehicles in the Solenis fleet. Where there is a difference of more than 5% the calculated emissions are scaled to the known number of vehicles. This is the case for the North America and Europe regions.
Refrigerants	Refrigerant replaced	Emissions due to refrigeration losses from air conditioning and industrial refrigeration processes are calculated by taking the reported top up volumes of refrigerants from our operations and multiplying by the global warming potential of the specific refrigerant used.
Biogenic emissions	Fuel use	The activity data is combined with emission factors from Sphera Managed LCA Content 2024.2.
Scope 2 - Indirect emissions These emissions include CO ₂ , CH ₄ and N ₂ O emissions from electricity, steam, heat, and air consumption. Calculations are carried out using both location and market-based methodologies.		
Electricity used in manufacturing	Energy use	Activity data on our total electricity purchased is multiplied by country specific emission factors from Sphera Managed LCA Content 2024.2.
Fuel used in non-manufacturing properties	Average Data	Floor area and building type data for non-manufacturing properties under our operational control is reviewed and combined with intensity data from the Energy Information Administration (EIA)- Commercial Buildings Energy Consumption Survey (CBECS) . The resulting energy use is used to calculate emissions using emissions factors from Sphera Managed LCA Content 2024.2.
Heat	Energy use	Activity data is collected from the manufacturing sites on the quantity of steam used. The activity data is combined with emission factors from Sphera Managed LCA Content 2024.2.
Compressed air	Volume use	Activity data is collected from the manufacturing sites on the quantity of compressed air used. The emissions are calculated using emission factors from Sphera Managed LCA Content 2024.2.

Metric	Method	Methodology
Scope 3 - Other indirect emissions		
Category 1 Purchased goods and services	Hybrid	<p>Data on purchased goods and services is extracted from our SAP system.</p> <p>For direct spend on raw materials, where the weight purchased is known, emission factors from the Sphera Managed LCA Content 2024.2. database, based on the chemical name are used to calculate the emissions.</p> <p>Where only spend based data is available emissions are calculated using Supply Chain GHG Emission Factors for US Commodities and Industries v1.3 by NAICS-6.</p> <p>Spending on travel, waste, utilities and logistics is excluded from this category to avoid double counting with other Scope 3 categories.</p> <p>The spend data is extracted from our SAP system monthly. This means that some transaction reversals may not be included in the spend file resulting in a small overstatement of emissions.</p>
Category 2 Capital goods	Spend Based	<p>The capital spend in the financial year is mapped to the commodity types in the Supply Chain GHG Emission Factors for US Commodities and Industries v1.3 by NAICS-6. The spend for each category is then multiplied by the respective emission factor which is adjusted for inflation.</p>
Category 3 Fuel and energy related activities	Average Data	<p>Activity data from our total energy use is multiplied by country specific emission from Sphera Managed LCA Content 2024.2.</p>
Category 4 Upstream transportation and distribution	Hybrid	<p>The methodology for this category is the same as category 9. Logistics data is filtered for upstream shipments using the incoterms for the shipment.</p> <p>Data from multiple logistics service providers has been analyzed to estimate the emissions in this category. The data varies in quality depending on the service provider and region. Where activity data is not available the emissions are estimated based on spend. 60% of the reported emissions are based on distance and load data with the remainder based on spend. For some logistics service providers, data is missing for some months due to the integration process of the legacy Diversey business. In these cases, the data is scaled to a full year</p> <p>Where emissions data has been calculated by the logistics service provider using the Global Logistics Emissions</p>

Metric	Method	Methodology
		<p>Council Framework then these emissions are used directly. 12% of emissions in this category are calculated using this method.</p> <p>Where information on the shipment load, distance and mode are available from the transport providers then the emissions are calculated using this activity data and emission factors from the US EPA Emission factors Hub 2024. 7% of emissions in this category are calculated using this method.</p> <p>Where the start and end point of the delivery is known, the geodesic distance between the points is calculated and adjusted to reflect actual transport distance by applying a non-linear adjustment factor of 1.3. This distance is combined with the shipment weight and emission factors from the US EPA Emission factors Hub 2024. 41% of emissions in this category are calculated using this method.</p> <p>The remaining 40%, where location data was not available, are spend based using Supply Chain GHG Emission Factors for US Commodities and Industries v1.3 by NAICS-6.</p>
Category 5 Waste generated in operations	Waste Specific	Activity data from waste produced by each manufacturing site globally was multiplied by waste specific emission factors from US EPA Emission factors Hub 2024 , Table 9.
Category 6 Business travel	Hybrid	<p>This category covers all travel managed through the Solenis travel and expense systems. This includes travel of non Solenis employees where Solenis have arranged and paid for the travel.</p> <p>The Diversey business was not included in the Egencia system until April 2024. The data from April to September 2024 was therefore scaled to the full year to calculate the emissions.</p> <p>For air travel, distance and cabin class data for each is provided by our business travel partner, Egencia. This data is combined with the DEFRA UK Government GHG Conversion Factors for Company Reporting 2024 to calculate the emissions.</p> <p>For rail travel, emissions data is provided directly by our travel partner Egencia. Egencia uses a combination of DEFRA UK Government GHG Conversion Factors for Company Reporting 2024 emission factors and factors provided by the rail operating companies.</p>

Metric	Method	Methodology
		<p>Emissions from hotel stays are calculated using nights and rooms stayed data our internal travel expenses system. This is combined with country specific emission factors from DEFRA UK Government GHG Conversion Factors for Company Reporting 2024. Where data gaps exist in emission factors for a specific country, emission factors from hotelfootprints.org are used.</p> <p>For taxi journeys emissions are calculated using spend data from the travel expenses system. The total taxi spend is combined with taxi service spend factor from the Supply Chain GHG Emission Factors for US Commodities and Industries v1.3 by NAICS-6.</p> <p>Business journeys made by our employees using their personal vehicles, with the fuel use claimed back through the expense system, are additionally calculated. Data from the internal expense system is used together with average fuel cost data to calculate the amount of fuel used by journey. Emission factors for US EPA Emission factors Hub 2024 are used to calculate the fuel emissions. For this calculation, it is assumed that all personal vehicles are solely fueled by gasoline.</p> <p>Emissions from our fleet of leased vehicles are not included in Scope 3 Category 6 but are fully allocated in our Scope 1 calculation.</p>
<p>Category 7 Employee commuting</p>	<p>Average Data</p>	<p>The employee commuting behavior of the Solenis facility-based workforce totaling 10,404 employees is covered in this category. Non-facility-based employees are considered as working remotely and are excluded from the calculation.</p> <p>Employee commuting emissions are calculated using the distance from the employee home zip code to their facility location. Based on company policies the assumption is made that manufacturing site workers commute 4 times per week and all other employees commute 3 times per week. An average number of working weeks of 46 per year is used in the calculation. Transport mode is calculated using statistical data for each region. The data on transport mode and distance is combined with emission factors from US EPA Emission factors Hub 2024, table 10.</p>
<p>Category 8 Upstream leased assets</p>		<p>All the leased assets are considered as an operating lease under Solenis operating control. The emissions from these assets are included in Scope 1 and inventory in</p>

Metric	Method	Methodology
		accordance with the Greenhouse Gas Protocol, Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Appendix A.
Category 9 Downstream transportation and distribution	Hybrid	The methodology for this category is the same as category 4. Logistics data is filtered for downstream shipments using the incoterms for the shipment.
Category 10 Processing of sold products	Average Data	Most chemical products sold by us are processing aids improving our customers' processes, reducing energy consumption and processing. Very few of our products require additional energy from the customer. For these products an estimate has been made of the additional energy used when the product is applied at the customer site. This combined with sales volume data and average US electricity emission factors from US EPA Emission factors Hub 2024 is used to calculate the emissions.
Category 11 Use of sold products	Direct use-phase	<p>Direct use phase emissions for the Taski business and dosing and monitoring equipment are calculated. Indirect use phase emissions are not reported.</p> <p>For the Taski floor cleaning products, data on total product sales is combined with product specific carbon footprint calculation data. A product life of 7.5 years is used for vacuum cleaners, 7 years for scrubber driers and 10 years for single disc machines.</p> <p>For dosing and monitoring equipment, the number of units sold is combined with average electricity consumption data and average US emissions factors from US EPA Emission factors Hub 2024. An average product life of 5 years is used for this calculation.</p>
Category 12 End of life treatment of sold products	Waste Specific	<p>End of life treatment emissions are calculated for Taski machines, packaging and wastewater treatment caused by the use of our laundry and cleaning chemicals.</p> <p>For the Taski floor cleaning products, data on total product sales is combined with product specific carbon footprint calculation data.</p> <p>For cleaning chemicals, the amount of water used per unit mass of product is assigned based on product family. This is combined with product sales volumes to calculate the amount of wastewater produced. The volume of wastewater produced is combined with emissions factors</p>

Metric	Method	Methodology
		<p>from DEFRA UK Government GHG Conversion Factors for Company Reporting 2024 to calculate the emissions.</p> <p>End of life emissions from packaging waste are calculated based on the total spend on packaging materials. Typical Packaging weights per US dollar are used to estimate the total packaging weight of plastic, fiber, wood and metal. Assumptions are made on the disposal route as follows:</p> <p>Plastics, 40% recycled, 10% is reused, 50% landfill Wood (mainly pallets), 90% reused, 10% landfill Metal (mainly IBC cages), 100% recycle Fiber, 50% recycle, 50% landfill</p> <p>Emission factors are assigned based on waste type and disposal route from US EPA Emission factors Hub 2024.</p>
Category 13 Downstream leased assets	Not applicable	Solenis didn't lease any of its assets to other entities in the financial year 2024.
Category 14 Franchises	Not applicable	Solenis didn't operate any franchise in the financial year 2024.
Category 15	Spend	Solenis has one joint venture. Our revenue from the joint venture was combined with emission factors from Supply Chain GHG Emission Factors for US Commodities and Industries v1.3 by NAICS-6 .
Other emissions		
Emissions of ozone-depleting substances (ODS)	Refrigerant replaced	Emissions due to refrigeration losses from air conditioning and industrial refrigeration processes are calculated by taking the reported top up volumes of refrigerants from our operations and multiplying by the ozone depleting potential of the specific refrigerant used.
NO _x	Direct measurement and Fuel use	Where the site measures its NO _x emissions directly, they are entered into a central database. For sites without direct measurement the emissions are calculated using the known fuel use, combustion method and emissions factors from the National Atmospheric Emissions Inventory .
SO _x	Direct measurement and Fuel use	Where the site measures its SO _x emissions directly, they are entered into a central database. For sites without direct measurement the emissions are calculated using the known fuel use, combustion method and emissions factors from the National Atmospheric Emissions Inventory .



Metric	Method	Methodology
VOC	Direct measurement	VOC emissions are reported for the sites that measure their VOC emissions directly. 12 sites currently report VOC emissions representing 22% of our production volume.
Energy		
Fuel consumption	Direct measurement, supplier invoices and spend data	<p>Each site reports its monthly fuel use into a central database. This information is based on a combination of local meter readings and supplier invoices depending on the situation at the site.</p> <p>Information on fuel use in leased vehicles is collected from the leasing companies.</p> <p>Some fuel is purchased directly by Solenis employees for use in company owned or Leased vehicles. Spend data for these transactions is converted to an equivalent fuel amount using regional fuel price information. For this calculation it is assumed all fuel purchased is motor gasoline.</p> <p>Fuel data is collected on a volume basis and converted to the equivalent energy value using conversion factors published in the US EPA Emission factors Hub 2024.</p>
Electricity consumption	Direct measurement and supplier invoices	Each site reports its monthly electricity use and sales into a central database. This information is based on a combination of local meter readings and supplier invoices depending on the situation at the site.
Steam consumption	Direct measurement and supplier invoices	Each site reports its monthly steam use and sales into a central database. This information is based on a combination of local meter readings and supplier invoices depending on the situation at the site. Steam data is collected on a mass basis and converted to an energy value using published steam tables. It is assumed all supplied steam is saturated at 4 barg.
Heat	Direct measurement and supplier invoices	Each site reports its heat from district heating schemes into a central database. This data is entered directly in energy units.
Compressed air consumption	Direct measurement and supplier invoices	Sites that have a pipe compressed air supply report the volume of compressed air used in the central database. It is assumed all air is provided at 7 barg. The air is converted to an equivalent electricity use using published design data for electrical compressors.
Energy Intensity	Calculation	The total energy consumed is from all our operations is divided by the total reported production from our manufacturing sites.

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Water		
Water withdrawal	Direct measurement and supplier invoices	Each site reports its monthly water withdrawal into a central database. The data is entered into the categories specified in GRI 303: Water and Effluents 2018 .
Water discharge	Direct measurement and supplier invoices	Each site reports its monthly water discharge into a central database. The data is entered into the categories specified in GRI 303: Water and Effluents 2018 .
Water consumption	Calculation	Water consumption is calculated by finding the difference between the water withdrawn and the water discharge.
Water consumption intensity	Calculation	The total water consumed from all our operations is divided by the total reported production from our manufacturing sites.
Water reclaimed	Direct measurement and supplier invoices	Water reclaimed is the quantity of cleansed water that is safely discharged from Solenis manufacturing facilities directly to surface water.
Waste		
Waste generated	Direct measurement and supplier invoices	Each site reports the waste it generates into a central database. The data is entered into the categories specified in GRI 306: Waste 2020 .
Waste generation intensity	Calculation	The total waste generated from all our operations is divided by the total reported production from our manufacturing sites.
Waste disposal intensity	Calculation	The total waste sent to disposal from all our operations is divided by the total reported production from our manufacturing sites. This excludes any waste that is recycled or recovered for reuse.
Incidents		
Environmental Incident Classification (EIC) Score	Calculation based on Internal Reporting	Each incident is classified according to its severity and assigned a score. The total score is the sum of the individual incident scores. The methodology is detailed in our sustainability & regulatory library, Determining Environmental Incident Classification .



Social Data

Metric	Method	Methodology
Employees		
Employee data	Workday system	All data relating to the number and classification of employees is collected in the Workday system. The employee numbers are the numbers reported at the end of financial year 2024.
Work related injuries for all employees		
High-consequence work-related injury	Internal reporting	Number of injuries from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within six months.
Recordable Injuries (OSHA criteria)	Internal reporting	Recordable incident as defined by OSHA Injury and Illness Recordkeeping and Reporting Requirements .
Total recordable rate (OSHA criteria)	Calculation	Calculated by multiplying the total number of incidents which meet the criteria of being recordable by the U.S. Occupational Safety and Health Administration (OSHA) in one year by 200,000 hours and divided by the total number of hours worked by all employees. 200,000 hours are the expected hours normally worked in a year by 100 workers.
Days away from work cases (OSHA criteria)	Internal Reporting	Recordable incident that involved days away from work as defined by OSHA Injury and Illness Recordkeeping and Reporting Requirements .
Days away from work rate (OSHA criteria)	Calculation	Days Away from Work Rate (DAWR) – Calculated by multiplying the total number of OSHA recordable incident that involved days away from work in one year by 200,000 hours and divided by the total number of hours worked by all employees. OSHA days away from work incident as defined by OSHA Injury and Illness Recordkeeping and Reporting Requirements . 200,000 hours are the expected hours normally worked in a year by 100 workers.
Lost time injury frequency rate (LTIFR)	Calculation	Lost time injury frequency rate (LTIFR) for direct workforce - (total number of lost time injury events) x 1,000,000 / total hours worked company wide.
Lost time injury severity rate (LTISR)	Calculation	Lost time injury severity rate (LTISR) for direct workforce - (number of days lost due to injuries) x 1,000 / total hours worked.
Number of hours worked	Internal Reporting	Total hours worked by all Solenis employees and directly supervised contractors.

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Governance Data

Metric	Method	Methodology
Management Systems		
% RC14001 Certified Facilities	Calculation	The number of certified facilities as a percentage of the total number of facilities. This excludes newly acquired sites that have been part of Solenis for less than three years.
% ISO 14001 Certified Facilities	Calculation	The number of certified facilities as a percentage of the total number of facilities. This excludes newly acquired sites that have been part of Solenis for less than three years.
% ISO 45001 Certified Facilities	Calculation	The number of certified facilities as a percentage of the total number of facilities. This excludes newly acquired sites that have been part of Solenis for less than three years.
% SEDEX Certified Facilities	Calculation	The number of certified facilities as a percentage of the total number of facilities. This excludes newly acquired sites that have been part of Solenis for less than three years.
# ISO 50001 Certified Facilities	Calculation	The number of certified facilities. This excludes newly acquired sites that have been part of Solenis for less than three years.

References

1. [DEFRA UK Government GHG Conversion Factors for Company Reporting 2024](#)
2. [US EPA Emission factors Hub 2024](#)
3. [Supply Chain GHG Emission Factors for US Commodities and Industries v1.3 by NAICS-6](#)
4. [Energy Information Administration \(EIA\)- Commercial Buildings Energy Consumption Survey \(CBECS\)](#)
5. [GRI 303: Water and Effluents 2018](#)
6. [GRI 306: Waste 2020](#)
7. [National Atmospheric Emissions Inventory](#)
8. [OSHA Injury and Illness Recordkeeping and Reporting Requirements](#)
9. [Determining Environmental Incident Classification](#)
10. [Global Logistics Emissions Council Framework](#)